

665045. ST25

SEQUENCE LISTING

<110> SUCAMPO AG  
<120> METHOD FOR DIAGNOSING OR PREDICTING SUSCEPTIBILITY TO OPTIC NEUROPATHY  
<130> 665045  
<140> PCT/JP2005/005601  
<141> 2005-03-18  
<150> US 60/553986  
<151> 2004-03-18  
<150> US 60/604704  
<151> 2004-08-27  
<150> US 60/607359  
<151> 2004-09-07  
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<170> PatentIn version 3.2  
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 cgcctaaccg ctaacattac tgcaggccac ctactcatgc acctaattgg aagcgccacc 180  
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		acttacagga ctcaacatac tagtcacagc cctatactcc ctctacatat ttaccacaac	360
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24

&lt;210&gt; 43

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Primer/Probe

&lt;400&gt; 43

ggaaggctct cccgccttg tctc

24

&lt;210&gt; 44

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Primer/Probe

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24

&lt;210&gt; 45

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Primer/Probe

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24

&lt;210&gt; 46

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Primer/Probe

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gaggttgagt gacatgttcg aaac

24

&lt;210&gt; 47

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Primer/Probe

&lt;400&gt; 47

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24

&lt;210&gt; 48

&lt;211&gt; 23

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

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 ttattcaggo tttaggcata tgcttcttta aaaacgctat aaattatatt cctcttgcat 240  
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 aaaaacgcta taaattatat tcctcttgca ttctacttga gtggagggtt atagttaatc 240  
 tataactaca tattgaatag ggctaggaat atagattaaa tcatactcct atgctttagc 300  
 ttatttttac agttatagaa agcaagatgt actataacat agaattgcaa tctataatat 360  
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 acatttggtt tcctctatct tgctttatta ggtcggagac catgagaaac agcgtcaaata 180  
 catcttttca tgatcccaag ctgaaaggca agccctccag agagcgttat gtgaccacaca 240  
 accgagcaca ttggtgacag accttcgggg cotgtctgaa gccatagcct ccacggagag 300  
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<210> 69

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<223> Description of Artificial Sequence: Primer/Probe

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24

<210> 71

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 71  
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<210> 72  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 72  
 acatgaataa agaccatgtg ggca 24

<210> 73  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 73  
 gattatggat taagtgtgc ttog 24

<210> 74  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 74  
 tgtctcggta ttcagctcat 20

<210> 75  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 75  
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<210> 76  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 76  
 attggcgact gactgcttac 20

<210> 77  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 77  
 gaatctggaa ctgaacaaa 20

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<210> 78  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 78  
 ctgagcatct cttctgccca t 21  
  
 <210> 79  
 <211> 300  
 <212> DNA  
 <213> Homo Sapience  
  
 <400> 79  
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 cagaactgtc ataagatatg agctgaatac cgagacagtg aaggctgaga aggaaatccc 120  
 tggagctggc taccacggac agttcccgta ttcttggggt ggctacacgg acattgactt 180  
 ggcgtgtgat gaagcaggcc tctgggtcat ttacagcacc gatgaggcca aagggtccat 240  
 tgtcctctcc aaactgaacc cagagaatct ggaactcgaa caaacctggg agacaaacat 300  
  
 <210> 80  
 <211> 21  
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 <210> 81  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 81  
 aaagggatgg catttcttgc a 21  
  
 <210> 82  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 82  
 gtccacttgc ctggtgtgtg act 23  
  
 <210> 83  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 83  
 caacatcaca atggatcg 18

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<210> 84  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 84  
 agccttagtt tgatctgttc attca 25  
  
 <210> 85  
 <211> 23  
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 <400> 85  
 gtttcacatt tccaggggag gct 23  
  
 <210> 86  
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 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 86  
 cgcccgccgc cgcccgccgc aatcccttgc atttctgttt tt 42  
  
 <210> 87  
 <211> 21  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 87  
 gtgacaagca cccagtgcg a 21  
  
 <210> 88  
 <211> 45  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 88  
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 <210> 89  
 <211> 25  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 89  
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 <210> 90  
 <211> 45



<212> DNA  
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 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 90  
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 <211> 21  
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 <400> 91  
 cagtggtgg actactctcg t 21  
 <210> 92  
 <211> 44  
 <212> DNA  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 92  
 cgcccgccgc cgcccgccgc gtcagatgat aattgtacag atat 44  
 <210> 93  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 93  
 aatgtatatt tcaaaggagg ataaa 25  
 <210> 94  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 94  
 ccactgcgac gtaaaggagc a 21  
 <210> 95  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 95  
 caaatccgaa ttccaatctg tataa 25  
 <210> 96  
 <211> 44  
 <212> DNA  
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 <220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 96

cgcccgccgc cgcccgccgc ggttgggagg caagactata agtt

44

<210> 97

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 97

ttctgttcac tactaggcta tggaa

25

<210> 98

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 98

caggcagaat tatttcaaaa ccat

24

<210> 99

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 99

cgagaataca gtcagggtg g

21

<210> 100

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 100

gcactacctc ctcatcgcat aaaca

25

<210> 101

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 101

ggccatgctg atgtgagctc t

21

<210> 102

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 102

cgcccgccgc cgcccgccgc ggactgtctg ctgagtgttgc tca

43

<210> 103  
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 <212> DNA  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 103  
 ggtgccttga ttggaatcc a 21  
  
 <210> 104  
 <211> 44  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 104  
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 <210> 105  
 <211> 25  
 <212> DNA  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 105  
 gaggcaaat atttgagtga aaaca 25  
  
 <210> 106  
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 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 106  
 aggcaatagg ttttgagggc cat 23  
  
 <210> 107  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 107  
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 <210> 108  
 <211> 27  
 <212> DNA  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 108  
 aagtcgagta tggggacccc ccgttaa 27  
  
 <210> 109  
 <211> 25

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<212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 109  
 ccccagtggtg tggccatata ttctt 25

<210> 110  
 <211> 23  
 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 110  
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<210> 111  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 111  
 cctctacatg gccctgtcct 20

<210> 112  
 <211> 240  
 <212> DNA  
 <213> Homo Sapiens

<400> 112  
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 tgaaaaggag gacagcccca gtgaaagcac aggaatgga cccccccacc tggccacccc 120  
 aaacctggac acgtttaccc cggaggagct gctgcagcag atgaaagagc tcttgaccga 180  
 gaaccaccag ctgaaagggt agcagggtg gccctgtgt gccccattca tctgggcct 240

<210> 113  
 <211> 2077  
 <212> DNA  
 <213> Homo Sapiens

<400> 113  
 atcccggtcg ggagtctct ccaggcggca cgatgccgag gaaacagtga ccctgagcga 60  
 agccaagccg ggcggcaggt gtggctttga tagctgtgtg tgccacttcc tggccttgga 120  
 tgagccgtac gctctgttaa acccaacttc ctacactttg aaacagctgc ctggttcagc 180  
 attaatgaag attagtcagt gacaggcctg gtgtgctgag tccgcacata gaagaatcaa 240  
 aaatgtccaa aatgtaactg gagagaaagt gggcaacttt tggagtgaact ttccacagg 300  
 aacttctgca atgtccatc aacctctcag ctgcctcact gaaaaggagg acagcccag 360  
 tgaaagcaca ggaaatggac cccccacct ggcccacca aacctggaca cgtttacccc 420  
 ggaggagctg ctgcagcaga tgaagagct cctgaccgag aaccaccagc tgaagaagc 480  
 catgaagcta aataatcaag ccatgaaagg gagatttgag gagctttcgg cctggacaga 540  
 gaaacagaag gaagaacgcc agttttttga gatacagagc aaagaagcaa aagagcgtct 600  
 aatggccttg agtcatgaga atgagaaatt gaaggaagag cttggaaaac taaaagggaa 660

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atcagaaagg tcacttgagg accccactga tgactccagg ctcccaggg ccgaagcgga 720  
 gcaggaaaag gaccagctca ggaccagggt ggtgaggcta caagcagaga aggcagacct 780  
 gtggggcatc gtgtctgaac tgcagctcaa gctgaactcc agcggctcct cagaagattc 840  
 ctttgttgaa attaggatgg ctgaaggaga agcagaaggg tcagtaaaag aaatcaagca 900  
 tagtcctggg cccacgagaa cagtctccac tggcacggca ttgtctaaat ataggagcag 960  
 atctgcagat gggggccaaga attacttcga acatgaggag ttaactgtga gccagctcct 1020  
 gctgtgccta agggaaaggga atcagaaggt ggagagactt gaagttgcac tcaaggaggc 1080  
 caaagaaaga gtttcagatt ttgaaaagaa aacaagtaat cgttctgaga ttgaaacca 1140  
 gacagagggg agcacagaga aagagaatga tgaagagaaa ggcccgagga ctgttggaag 1200  
 cgaagtggaa gcactgaacc tccagggtgac atctctgttt aaggagcttc aagaggctca 1260  
 taaaaactc agcgaagctg agctaataaa gaagagactt caagaaaagt gtcaggccct 1320  
 tgaaagggaa aattctgcaa ttccatcaga gttgaatgaa aagcaagagc ttgtttatcc 1380  
 taacaaaaag ttagagctac aagtggaaag catgctatca gaaatcaaaa tggaaacaggc 1440  
 taaaacagag gatgaaaagt ccaaattaac tgtgctacag atgacacaca acaagcttct 1500  
 tcaagaacat aataatgcat tgaaaacaat tgaggaacta acaagaaaag agtcagaaaa 1560  
 agtggacagg gcagtgtgta aggaactgag tgaaaaactg gaactggcag agaaggctct 1620  
 ggcttccaaa cagctgcaaa tggatgaaat gaagcaaacc attgccagc aggaagagga 1680  
 cctggaaacc atgaccatcc tcagggtcca gatggaagtt tactgttctg attttcatgc 1740  
 tgaaagagca gcgagagaga aaattcatga ggaaaaggag caactggcat tgcagctggc 1800  
 agttctgtcga aaagagaatg atgctttcga agacggaggc aggcagtcct tgatggagat 1860  
 gcagagtcgt catggggcga gaacaagtga ctctgaccag caggcttacc ttgttcaaag 1920  
 aggagctgag gacagggact ggccggcaaca gcggaatatt ccgattcatt cctgccccaa 1980  
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 ttaagtgttg atgtatcacc tccccaaac tgttgggt 2077

<210> 114  
 <211> 240  
 <212> DNA  
 <213> Homo Sapiens

<400> 114  
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 caatgggtag gagaatgtcc agggctatga aagtcagta tggggacccc cccttaacga 120  
 agacagggcc atgtagaggg ccccgaggag tgaaagagcc tccaggacct ccaggtatgg 180  
 aatacagggg acgtttaaga agatatggcc acacactggg gccctgagaa gtgagagctt 240

<210> 115  
 <211> 18  
 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 115  
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18

<210> 116  
 <211> 17  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 116  
 gtggtggaga acaaaca 17  
  
 <210> 117  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 117  
 ggtcttactg gccactgtg agcgctc 27  
  
 <210> 118  
 <211> 16  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 118  
 taacggggag aaaagg 16  
  
 <210> 119  
 <211> 17  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 119  
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 <210> 120  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 120  
 gcgatccttc agcccaagtgc ccccttc 26  
  
 <210> 121  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 121  
 gaaaatcatt ttggggagc 19  
  
 <210> 122  
 <211> 19  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 122

aaaaatcatt ttggggagc

19

<210> 123

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 123

tgctctctg agtcaatgta tttaccactt tccctgagaa atct

44

<210> 124

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 124

cttgctttc agcttgg

17

<210> 125

<211> 17

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 125

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17

<210> 126

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 126

gttgtgggtc acataacgct ctctggaggg t

31

<210> 127

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

<400> 127

ctctggggca ctgc

14

<210> 128

<211> 14

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Primer/Probe

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<400> 128  
ttcctgggca ctgc 14

<210> 129  
<211> 29  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 129  
ctgcacagct tccccggott cagaaaaca 29

<210> 130  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 130  
tttaagcgt atattgaaga aaa 23

<210> 131  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 131  
cttaagcgt atattgaaga aaa 23

<210> 132  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 132  
cttggttgta atttttgctc ttgctggt cctottcaa 40

<210> 133  
<211> 16  
<212> DNA  
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<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 133  
gtcacagttg ctttgt 16

<210> 134  
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<212> DNA  
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<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 134  
ctcacagttg ctttgt 16



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<210> 135  
 <211> 31  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 135  
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 <210> 136  
 <211> 19  
 <212> DNA  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 136  
 cttggggttt tcagtatga 19  
  
 <210> 137  
 <211> 19  
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 <220>  
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 <400> 137  
 tttggggttt tcagtatga 19  
  
 <210> 138  
 <211> 38  
 <212> DNA  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 138  
 cccacaaatg ccaccagaac ttaacgattc ttcactta 38  
  
 <210> 139  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
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 <400> 139  
 attcagtttc tattttctgct tg 22  
  
 <210> 140  
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 <212> DNA  
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 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
  
 <400> 140  
 gttcagtttc tattttctgct tg 22  
  
 <210> 141  
 <211> 43  
 <212> DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Primer/Probe

&lt;400&gt; 141

ctcatcccta tagttttaca agacagcaaa agattggtgg ctt 43

&lt;210&gt; 142

&lt;211&gt; 290

&lt;212&gt; DNA

&lt;213&gt; Homo Sapiens

&lt;400&gt; 142

ttgaattcca cctccatcc ccagaaaaac tggagtaaaa caaaaagagg agatggacaa 60

agtgtgtatt tgaatggcatc cctgggaag agactctaaa ttatcccat aggtcttact 120

gggccactgt gagcgcttg gtggagaaca acaaaaaatt ctgggtgctc agttgtctaa 180

cctgaaaaat gggaactagcg gaaaaagcca atgtgttcca tgcacctttt gottttctta 240

ttaaggcatg atgtcacctg tacagtaact gccctgtgtg tacttcaggg 290

&lt;210&gt; 143

&lt;211&gt; 240

&lt;212&gt; DNA

&lt;213&gt; Homo Sapiens

&lt;400&gt; 143

ccagctctcc accgccggt ggcctgcag acgtccgct cgtgccttc tctcctggca 60

ggcgtgcct tttctcccg ttaaaggga cttgggctga aggatcgctt tgagatctga 120

ggaacccgca gcgcttgag ggacctgaag ctgttttct tcgttttctt ttgggttcag 180

tttgaacggg aggttttga tcccttttt tcaaatgga ttatttgctc atgattttct 240

&lt;210&gt; 144

&lt;211&gt; 300

&lt;212&gt; DNA

&lt;213&gt; Homo Sapiens

&lt;400&gt; 144

atccagtggc agaaccacga tcaaaacaac cacaacacag accggagcag ccataaggac 60

agcatgaact gaccaccctt agaagcactc ctcggtactc ccataatctc ctccggagaaa 120

aaaatcacaa ggcaactgtg actccggga tctcttctct gatccttctt ccttaattca 180

ctccacacc caagaagaaa tgctttccaa aaccgcaagg gtagactggt ttatccaccc 240

acaacatcta cgaatcgtac ttctttaatt gatctaattt acatattctg cgtgttgtat 300

&lt;210&gt; 145

&lt;211&gt; 300

&lt;212&gt; DNA

&lt;213&gt; Homo Sapiens

&lt;400&gt; 145

ttaatttttc ttaaatgtt aactggcagt aagtctttt tgatcattcc cttttccata 60

taggaaacat aattttgaag tggccagatg agtttatcat gtcagtgaat aataattacc 120

cacaatgcc accagaactt aacgattctt cacttcttgg ggttttcagt atgaacctaa 180

ctccccacc caacatctcc ctccacatt gtcaccattt caaaggggcc acagtgactt 240

ttgtctgggc ttttccaga tgtttacaga ctgtgagtag agcagaaaat cttttactag 300

&lt;210&gt; 146

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<211> 360  
 <212> DNA  
 <213> Homo Sapience

<400> 146  
 gaggtagagg cagtgttaagc caggctgttc tcctggctct tctttgaatt attctttctc 60  
 tgggtgtctgc tacttcttgg tactgtagt tttgcattcta gtataaaaaac actaaatttg 120  
 ttgtcctatt tttttctcac ttctcttttag cgtcgagaag tggcaaaaac agttttctgc 180  
 ttggttgtaa tttttgctct ttgttggttc cctcttcatt taagccgtat attgaagaaa 240  
 actgtgtata acgagatgga caagaaccga tgtgaattac ttaggtatga tcctgtgtac 300  
 tcgctagaaa attggagttt ctcagatttt catattttata atactttttac aaaaccagct 360

<210> 147  
 <211> 360  
 <212> DNA  
 <213> Homo Sapience

<400> 147  
 ggaggagacg gggaggacag actggaggcg tgttctctcg gagttttctt tttcgtgcga 60  
 gccctcgcgc gcgcgtacag tcatcccgct ggctctgacga ttgtggagag gcggtggaga 120  
 ggcttcatcc atcccaccog gtctctgcgc gggattgggg tcccagcgag acctccccgg 180  
 gagaagcagt gcccaggagg ttttctgaag ccggggaago tgtgcagccg aagccgccgc 240  
 cgcgcgggag cccgggacac cggccaccct ccgcgccacc caccctcgcc ggctccggct 300  
 tcctctggcc caggcgccgc gcggaccogg cagctgtctg cgcacgccga gctccacggt 360

<210> 148  
 <211> 300  
 <212> DNA  
 <213> Homo Sapience

<400> 148  
 taatcattcc ctgatgaatt tttttaagtt taacatttgt tatataagat tttcttacag 60  
 aggagtatta atcgtaaaaa ttctctcatc cctatagttt tacaagacag caaaagattg 120  
 gtggctgttc agtttctatt tctgcttgcc attggccatc actgcatttt tttatacact 180  
 aatgaacctgt gaaatgttga gaaagaaaag tggcatgcag attgctttta atgatcacct 240  
 aaagcaggta agaaaataca aatatttgat aactcgtggt tgaatttata attatgaata 300

<210> 149  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 149  
 ccgcctcttc gtcttcttca actg 24

<210> 150  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 150  
 gatagcaggt gaactcgaag ccca 24

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<210> 151  
 <211> 300  
 <212> DNA  
 <213> Homo Sapience

<400> 151  
 ttcttggcca acgtggtgaa ggccttccac cgcgagctgg tgcccgaccg cctcttcgtc 60  
 ttcttcaact ggctgggcta cgccaactcg gccttcaacc ccatcatcta ctgccgcagc 120  
 cccgacttcc gcaaggcctt ccagggactg ctctgctgcg cgcgcagggc tgcccgccgg 180  
 cgccacgcga cccacggaga ccggccgcgc gcctcggggt gtctggcccg gcccggaacc 240  
 ccgccatcgc ccggggccgc ctcggacgac gacgacgacg atgtcgtcgg ggccacgccg 300

<210> 152  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 152  
 catggatcaa ctcaacttga 20

<210> 153  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 153  
 tatggatcaa ctcaacttga g 21

<210> 154  
 <211> 37  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 154  
 tcttgtgcct tcagctgtga ggagggttt gaattaa 37

<210> 155  
 <211> 600  
 <212> DNA  
 <213> Homo Sapience

<400> 155  
 tgtttttatt ttattttaag ataaaaagaa ctattgaaga gcttgggaac ttggttacct 60  
 tgggaaacgt attgctggag atgcaaacaa acttctaaag tgctctctcg tgtgttccag 120  
 ctgtgagatg cgatgctgtc caccagcccc cgaagggttt ggtgagggtg gotcattccc 180  
 ctattggaga attcacctac aagtctctt gtgccttcag ctgtgaggag ggatttgaat 240  
 tacatggatc aactcaactt gagtgcacat ctacagggaca atggacagaa gaggttcctt 300  
 cctgccaaagg tagaattgag tgcagacttt tttagggtac aggtcaaata cttcataaag 360  
 tttctgaacc tagattgcc caaagggtt tggtcotaat ttctacatg ctgaaaacta 420  
 agtagcgctt acactttaca ttcatgttg acttttaagc aagttttgga agttttccag 480

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tagatttttc tgaaactctg cctgtgtacc taacatttgc agtggtaaaa tgttcaagcc 540  
 tggcagttcc gggaagatc aacatgagct gcagtgggga gcccggtttt ggcactgtgt 600

<210> 156  
 <211> 17  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 156  
 tgtcttcaga gccagtt 17

<210> 157  
 <211> 17  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 157  
 agtcttcaga gccagtt 17

<210> 158  
 <211> 39  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 158  
 agagctaattg aaagccagtc cattaggcag tatctccac 39

<210> 159  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 159  
 aatcctggga gatgtatttg 20

<210> 160  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 160  
 gatcctggga gatgtatttg 20

<210> 161  
 <211> 49  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 161  
 agcactttta tggcacaaat gatcactatt ttcttgacct ctacttact 49

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<210> 162  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 162  
 ccgttgctcc acca 14

<210> 163  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 163  
 acgttgctcc acca 14

<210> 164  
 <211> 53  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 164  
 actatcttat tttcttacct gaatctctga tcttactaa gagtctgaat aat 53

<210> 165  
 <211> 1020  
 <212> DNA  
 <213> Homo Sapience

<400> 165  
 agagcctcct agcccgtogg tgtctgccc catgatccc tttgtctatc cccgaccatg 60  
 gcgaagctga ttgcgtcac cctcttgggg atgggactgg cactcttcag gaaccaccag 120  
 tcttcttacc aaacacgact taatgtctc cgagaggtag aaccogtaga acttcctaac 180  
 tgtaatttag ttaaaggaat cgaaactggc tctgaagact tggagatact gcctaattga 240  
 ctggctttca ttagctctgg attaaagtat cctggaataa agagcttcaa cccaacagt 300  
 cctggaaaaa tacttctgat ggacctgaat gaagaagatc caacagtgtt ggaattgggg 360  
 atcactggaa gtaaatttga tgtatcttca tttaaccctc atgggattag cacattcaca 420  
 gatgaagata atgccatgta cctcctgggt gtgaaccatc cagatgocaa gtccacagt 480  
 gaggttgtaa aatttcaaga agaagaaaaa tcgcttttgc atctaaaaac catcagacat 540  
 aaacttctgc ctaatttgaa tgatattgtt gctgtgggac ctgagcactt ttatggcaca 600  
 aatgatcact attttcttga cccctactta caatcctggg agatgtattt gggtttagcg 660  
 tggctgtatg ttgtctacta tagtccaagt gaagttcgag tgggtggcaga aggatttgat 720  
 tttgctaata gaatcaacat ttaccccgat ggcaagtatg tctatatagc tgagttgctg 780  
 gtcataaga ttcatgtgta tgaagagcat gctaattgga ctttaactcc attgaagtcc 840  
 cttgacttta ataccctcgt ggataacata tctgtggatc ctgagacagg agaccttgg 900  
 gttggatgcc atcccaatgg catgaaaatc ttcttctatg actcagagaa tcctcctgca 960

665045.ST25  
tcagagggtgc ttccaatcca gaacattcta acagaagaac ctaaagtgac acaggtttat 1020

<210> 166  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 166  
gcgagaccct cactgggatt 20

<210> 167  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 167  
gcctggagag gagctggatt 20

<210> 168  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 168  
ggttgggatt tggggaagga 20

<210> 169  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 169  
ccagacatga ctccattgta ggaa 24

<210> 170  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 170  
gagtcagagg ttggagtcatt gt 22

<210> 171  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer/Probe

<400> 171  
ccgttgctgc aggtcctcat a 21

<210> 172

<211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 172  
 cagacacgcg gaccattgta 20

<210> 173  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 173  
 ggggtgtggca gtcagagatc a 21

<210> 174  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 174  
 occaacttga tcacagcact t 21

<210> 175  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 175  
 ctaggcacct atgggcagtc aa 22

<210> 176  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 176  
 ctaatggctg tagctggtgc t 21

<210> 177  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 177  
 gtaggggaag gtgttgttgt aa 22

<210> 178  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence



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<220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 178  
 ccagagcaac gtggtggtca 20  
  
 <210> 179  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 179  
 ggtagccggt gtcccagga 19  
  
 <210> 180  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 180  
 ggctgtgtac accaccaacc a 21  
  
 <210> 181  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 181  
 ctogtaactg gacgtgttg t 21  
  
 <210> 182  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 182  
 catgatctgc ggtgtgtct a 21  
  
 <210> 183  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Primer/Probe  
 <400> 183  
 gcagcccag ccacagcatt 20  
  
 <210> 184  
 <211> 540  
 <212> DNA  
 <213> Homo Sapience  
  
 <400> 184  
 ttagttccta caatggagtc atgtctggga agaattctagg gtccaatatg agccacatgt 60  
 caagggccag gtgtgcatca aagacaaagg gtgaagtat gagtacagagg ttggagtcat 120

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gtctgggtca aaggccaggg gtcaggcttg gccatggttc catcttgatg cacaggagct 180  
 gaaggacagg atgacggaac tgttgcccct gagctcggtc ctggagcagt acaaggcaga 240  
 cacgcggaacc atigtacgct tgcgggagga ggtgaggaat ctctccggca gtctggcggc 300  
 cattcaggag gagatgggtg cctacgggta tgaggacctg cagcaacggg tgatggccct 360  
 ggaggccogg ctccacgcct gcgccagaa gctgggtatg ccttggccct tgaccctgac 420  
 cctgatctc tgactgccac acccaactcc agtatcacct gtttgtgcct agaagctgga 480  
 cacagttttg acctctaact tttaaacctc aacccttgac cttcctacct aaggctacac 540

<210> 185  
 <211> 14  
 <212> DNA  
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<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 185  
 ttttcgcctc ccgt 14

<210> 186  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 186  
 gtttcgcctc ccgt 14

<210> 187  
 <211> 27  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 187  
 gctgccaggt cgggaatatt ccagggc 27

<210> 188  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 188  
 cgccatggag accaacaccc 20

<210> 189  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 189  
 gccggttccc tgctctctgt c 21

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<210> 190  
 <211> 360  
 <212> DNA  
 <213> Homo Sapience

<400> 190  
 cgccatggag accaacaccc ttcccacgc cactccccct tcctctcagg gtccctgtcc 60  
 cotccagtga atcccagaag actctggaga gtcttgagca gggggcggca ctctggcctc 120  
 tgattggtcc aaggaaggct ggggggcagg acgggaggcg aaacccttg aatattccg 180  
 acctggcagc ctcacgagc tcggtgattg gtcagaagg gaaaaggcgg gtctccgtga 240  
 cgacttataa aacgccaggg gcaagcggtc cggataacgg ctagcctgag gagctgctgc 300  
 gacagtcac tacotttttc gagagtgact ccgttgtcc caaggcttcc cagagcgaac 360

<210> 191  
 <211> 13  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 191  
 gtggcccaga gca 13

<210> 192  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 192  
 ttggcccaga gcaa 14

<210> 193  
 <211> 37  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 193  
 ggcagataac aaaagtatca ggaagggtgcc ctcgatc 37

<210> 194  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 194  
 taagtcccc ttcaacaacc 20

<210> 195  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 195

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aagctgaaaa gtacgcataa atg 23

<210> 196  
 <211> 300  
 <212> DNA  
 <213> Homo Sapience

<400> 196  
 ttttgtctgg tctttctagc attaaccccc tagacacacc taaggctgat gccgggggga 60  
 accgtctttg attgctctgg gccacatoga gggcaccttc ctgatacttt tgttatctgc 120  
 cactggggac cgggttgtg aagggggact taagattttc tcgaaggagg ggtcactgtg 180  
 agggcctttc ctgcctgcta ggggcttcag tttgggggcc cccactccg actccgggca 240  
 agggaggggt ccccatctcc cccgggcctc tcgggtcttg gggctctccc gggaggccgg 300

<210> 197  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 197  
 ctacctaaga gctatctacc gttc 24

<210> 198  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 198  
 ggctgtccat gttgtggctg c 21

<210> 199  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 199  
 cttagtcttg aagtgaggg 19

<210> 200  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 200  
 tttagtcttg aagtgaggg 19

<210> 201  
 <211> 35  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

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<400> 201  
 tctctggctg gcgttttgca aacatacctt caata 35

<210> 202  
 <211> 240  
 <212> DNA  
 <213> Homo Sapience

<400> 202  
 ccaggactta caccagagga tcgataagtt ccgtttcacc ccacctttgg aggacagctg 60  
 cttccactat ggcttcaact ccaactacct gaagaaagtc atctcctact ggcggaatga 120  
 atttgactgg aagaagcagg tggagattct caacagatac cctcacttca agactaagat 180  
 tgaaggatg tttgcaaaac gccagccaga gagggatata tgatcatgaga acagccttct 240

<210> 203  
 <211> 15  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 203  
 tattgggtgc cagca 15

<210> 204  
 <211> 14  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 204  
 cattgggtgc cagc 14

<210> 205  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 205  
 tcgtgggtccg gcgcatggct tca 23

<210> 206  
 <211> 16  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 206  
 caaagggacg aggtgt 16

<210> 207  
 <211> 16  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Primer/Probe

<400> 207

gaaagggacg aggtgt		665045. ST25	16
<210>	208		
<211>	23		
<212>	DNA		
<213>	Artificial Sequence		
<220>			
<223>	Description of Artificial Sequence: Primer/Probe		
<400>	208		
gccggaccac	gacgtcacgc agt		23
<210>	209		
<211>	360		
<212>	DNA		
<213>	Homo Sapience		
<400>	209		
gcgcttacct	gccagactgc gcgccatggg gcaacccggg aacggcagcg cttcttgct	60	
ggcacccaat	ggaagccatg cgccggacca cgacgtcacg cagcaaaggg acgaggtgtg	120	
ggtggtgggc	atgggcatcg tcatgtctct catcgtcctg gccatcgtgt ttggcaatgt	180	
gotggtcac	acagccattg ccaagttcga gcgtctgcag acggtcacca actacttcac	240	
cacttcactg	gcctgtgctg atctggtcac ggccctagca gtggcgccct ttggggccgc	300	
ccatattctt	atgaaaatgt ggacttttgg caacttctgg tgcgagtttt ggacttccat	360	